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Transportation Planning and Public Involvement in Texas

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Report

Presented to the Faculty of the Graduate School of

The University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degrees of

Master of Science in Community and Regional Planning

and

Master of Public Affairs

The University of Texas at Austin

May 2016

Abstract

Transportation Planning and Public Involvement in Texas

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The University of Texas at Austin, 2016

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While the Texas Department of Transportation and other transportation planning organizations may seem to be succeeding at their mission on at least some levels, whether or not that mission is the best thing for the state and local communities remains to be seen. This report examines how TxDOT engages with the public, their intentions with that engagement, and the effects of that engagement on the planning process and the implementation of transportation solutions. Understanding how transportation objectives on a local scale correspond to those on a state scale is fundamental to this examination. Ultimately recommendations are provided with the aim of improving public involvement in the transportation planning process.

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Introduction

This report will examine the methodologies and practices used for community stakeholder involvement by the Texas Department of Transportation. The impetus for this report is the effort by the local volunteer group, Reconnect Austin, whose mission it is to “[Encourage] TxDOT to consider the needs of Austin as they rebuild the urban core of I-35.” Reconnects Austin’s efforts to engage TxDOT and community stakeholders was challenging and often at odds with TxDOT’s vision of the I-35 corridor in Austin. This conflict served as inspiration for this report to find a way for TxDOT and other groups interested in large-scale urban transportation issues to effectively engage with the community.

Industries refer to people who participate in their planning processes by different terms. TxDOT often uses the term “stakeholder” to refer to budgetary, governmental, or *key* stakeholders, and instead generally uses the phrase “the public” when speaking about participatory engagement. Nonetheless, for the purposes of this report “stakeholders” will be used herein as it is defined in *A Guide to the Project Management Book of Knowledge*:

Stakeholders are persons or organizations (e.g., customers, sponsors, the performing organization, or the public), who are actively involved in the project or whose interests may be positively or negatively affected by the performance or

completion of the project (Project Management Institute, Inc., 2008).

TxDOT has an established record of holding public involvement events in multiple phases of the highway development processes. Their dedicated Office of Public Involvement has mandates for engagement and transparency, and they hold frequent events that aim to educate and gather input from stakeholders. However, stakeholders interviewed for this report claim that the effectiveness of such TxDOT public events are often underwhelming¹. Participants at times feel as if their input has been ignored or outweighed by other interests. The governmental position the organization holds and its statutory mandate can at times seem to put TxDOT at odds with the interests of the communities they work with for any given project.

In fact, as this paper will show, aspects of TxDOT's governmental function and mandate inhibit effective stakeholder engagement. Because of TxDOT's statewide responsibilities and the relationship with the state legislature, working with local communities can be challenging. Incidentally, there is a fundamental disconnect based on scale that makes it exceedingly difficult for local communities to collaborate with the agency. While local communities are interested in accessibility and preserving and promoting their way of

¹ The stakeholder groups are based in three different cities in Texas and were chosen because of the intensity of their involvement with public processes related to particular TxDOT projects. This group is by no means a representative sampling of the population that participates in TxDOT public involvement events, but rather a sampling of groups that have a vested interest in transportation at the local level from a metropolitan perspective. The organizations the interviewees represent are community advocacy groups and have a history of involvement with TxDOT. Interviews were given between January and May of 2016. Although a structured set of interview questions was prepared before beginning interviews, the format of the interviews was iterative.

life, TxDOT consistently employs the fire hose approach to transportation: the rapid flow of long distance transportation. In terms of transportation, those are two very different scales and attempts to find common ground without recognizing the disparity in scale has been met with frustration and resentment.

Ultimately this report provides recommendations for improving stakeholder engagement not only to TxDOT but also to advocacy groups, such as Reconnect Austin, who are interested in urban transportation issues. As is the case with most public policy issues, the solutions are technically feasible but politically ambitious. Those recommendations are:

- Redefine TxDOT's mission
- Stop using the Travel Time Index
- Improve the gathering of information that affects public involvement
- Avoid conflicts of interest
- Improve public engagement methodologies and tools

To begin, this report provides an overview of the four case studies from three Texas cities that will help illustrate how communities engage with TxDOT during planning of highway projects. That section will be followed by an overview of the documents that guide the public involvement process at TxDOT, which will lead into a critique of their current public engagement methods. This will provide the foundation for an examination of the unique circumstances that make TxDOT's stakeholder involvement less than effective and the potential result of this ineffectiveness.

Case Studies Summary

AUSTIN, TX — I-35

I-35 was borne out of a New Deal project in 1935 and in Austin, Texas, it found its home just as the city made its plans to segregate its African American community to the east side of the city (Austin American Statesman, n.d.).

Today, the I-35 corridor in Austin is one of the most congested roadways in the U.S. (Merrefield, 2010), and plays an important role in the North American Free Trade Agreement. 23% of its traffic is comprised of trucks (Wangrin, n.d.).

Locally, I-35 is a symbol of the city's dark past, a literal obstacle to jobs and amenities for many residents, and a vital, if frustrating, conduit for getting through the city. As Austin experiences continued sprawl development, residents of Austin's suburban communities become increasingly dependent on I-35.

The Austin I-35 scenario is illustrative of the scale conflict between TxDOT's drive to push large volumes of traffic long distances and local communities' need for accessibility. The obvious tool for TxDOT is the fire hose, but many in the local communities believe that option is destructive and blind to the needs of the very city the highway is traveling through.

The advocacy group Reconnect Austin has proposed a solution that they believe would both provide local accessibility desired by local communities along the corridor, and the increased capacity needed to satisfy the continued demand on the corridor. Reconnect Austin has designed a plan that would add subterranean traffic lanes and cap I-35 in the most congested portion of the corridor. This, they believe, would not only connect east Austin to the central business district and many amenities the city has to offer, but add land for development which would in turn add a tax base that would essentially pay for the project over a number of years (Reconnect Austin, n.d.).

The conflict between interests, however, remains. TxDOT's role and responsibilities are clear, and efforts to improve local access and transportation are seen as out of scope for the agency. Nonetheless, communication channels between Reconnect Austin and TxDOT remain open.



Figure 1: Reconnect Austin I-35 Plan Rendering (Black + Vernooy, n.d.)

HOUSTON, TX — KATY FREEWAY AND GRAND PARKWAY

The Grand Parkway has been a long-running project to create a Houston beltway with an aim toward connecting commuters and commerce to new development surrounding the city. Lauded by commuters as the cure for congestion, it has not been without controversy.

A stakeholder interviewed for this report pointed out that while there was a good deal of public involvement in the planning, TxDOT did not incorporate public ideas or concerns into their plans. Moreover, the interviewee suggested that a significant reason for the expansion of the Grand Parkway had to do with developers and landowners who stood to profit from the project also held positions that had significant influence on the project. Bob Lanier, for instance, who would become mayor of Houston, owned 1,700 acres where the Grand Parkway now runs and at the time was the head of the Texas Highway Commission. Representative Ed Emmett was a key player in getting funding for the project as head of the North Houston Association development group (Schmitt, 2011).

When asked about the public involvement with the Katy Freeway (Figure 2), which at 26 lanes is now the widest freeway in the world (Christian, 2015), the interviewee for these case studies, who is a longtime transportation advocate for Houston, replied that he did not recall any public meetings held by TxDOT. There was, however, a Katy Freeway

Public Information Office and some evidence that TxDOT did hold regular meetings with local communities (Salyer, 2008).

When the same inquiry was made to the Jefferson Grime, TxDOT's Director of the Office of Public Involvement, he replied that Houston's public involvement was vastly different than Austin, and that transportation projects in Houston had a "tremendous amount" of backing from public officials.

The Katy Freeway exemplifies the conflict between the scale TxDOT operates on versus the transportation and accessibility needs of local communities. As it turns out, it is also an example of how increased lanes is not a solution for congestion. Since the widening of the Katy Freeway, congestion has actually increased to 55% during afternoon commute times (Cortright, Lobbyist Holds Up Spectacular Example of the Futility of Widening Highways, 2016).

The consulting firm WSP | Parsons Brinkerhoff acted as the engineering consultant for the Katy Freeway project. One aspect of their services includes providing "transportation & infrastructure engineering services to a wide variety of both public and private sector clients" (WSP | Parsons Brinkerhoff, n.d.). They describe their responsibilities on the Katy Freeway as including

“project administration, coordination with subconsultants, implementation of an extensive public involvement/agency coordination program, and quality assurance. WSP | Parsons Brinckerhoff staffed a public information office, developed newsletters, maintained the project web site, coordinated with the media, and spoke at community events. The Katy Public Information Office staff helped motorists to navigate the corridor during construction” (WSP | Parsons Brinckerhoff, n.d.).

It is worth noting that this firm that provides engineering services was also staffing a public information office.



Figure 2: Katy Freeway, Houston, Texas (Pool, 2014)

DALLAS, TEXAS — KLYDE WARREN PARK

In 2009 construction began on a deck over the Woodall Rogers Freeway (Spur 233) in Dallas, Texas, and in 2014 the 5-acre Klyde Warren Park was opened atop that eight-lane freeway. Funded through a public private partnership, the project may have never been possible if not for Dallas Mayor J. Erik Johnson, who in the 1960s push to have the Woodall Rogers Freeway recessed rather than elevated as TxDOT had proposed at the time. The interviewee for this case study suggested that Johnson withheld the use of the city's water to TxDOT they needed to make the elevated freeway columns until they agreed to recesses the freeway. This allowed the freeway to be capped some fifty years later so that Klyde Warren Park could be created.

However, like I-35 in Austin, there is a sordid history behind the Woodall Rogers Freeway. When it was built it destroyed African American communities in its path and dislocated residents and severed them from the rest of the city (Battle, 2015). While part of the aim of creating Klyde Warren Park was to mend that divide, there is still the matter of making the park financially viable, which requires programming that will bring in crowds that will pay for the park (Flick, 2012).

While financing and backing from public, private partnerships helped pave the way for capping Woodall Rogers Freeway with Klyde Warren Park, other highway projects were met with a disconnect between stakeholders needs and TxDOT. Responding to the

structural decay of Interstate Highway 345 TxDOT presented nine options to the public, none of which addressed the concerns or visions of the public. The level of response from the public on this project inspired Texas Transportation Commissioner Victor Vandergriff to approach the public involvement process in a different way. Intended to reach a broad spectrum of stakeholders early in the process, he formed the CityMAP plan, which has taken an aggressive approach to opening communication among stakeholder groups. The vision of CityMAP is explained on their website:

When the concepts of “compact city” and “smart growth” were first advanced in the 1990s, the conventional wisdom was that roadway capacity and livability at the neighborhood scale were incompatible. Today, after a generation of evolved thinking by urban planners, engineers, neighborhood leaders, economic developers, city leaders and other stakeholders in the business of city-building, the art of city design has embraced a context-sensitive approach to transportation and neighborhood design that recognizes that roadway capacity and livability are not competing objectives. The Dallas CityMAP process is an open and inclusive assessment of the challenges, opportunities, and potential solutions for the aging interstate corridors and adjacent neighborhoods (CityMAP, n.d.).

While the CityMAP process appears to be a more sincere effort to gather input from the public rather than going through the motions of holding outreach events, the plan, as of the writing of this report, has been delayed since December of 2015, so it is unclear how successful the project will be.



Figure 3: Klyde Warren Park, Dallas (Dillon Diers Photography, n.d.)

TxDOT Stakeholder Engagement Guiding Documents

TxDOT uses several documents to provide guidance for public involvement practices. These documents also serve to communicate to the general public TxDOT's intent and judgment of what public engagement entails.

This section will identify specific elements pertaining to public engagement from each document. A more thorough explanation of the importance of these elements and how they influence public outreach practices at TxDOT will be explored in later sections. In other words, the elements highlighted in this section are to provide background for later sections of this report where a more thorough explanation of the effects of their influence will be clarified.

The documents discussed in this chapter that influence to TxDOT's public engagement practices are:

- Values, Vision, Mission, and Goals Webpage
- Public Engagement Activities Update Report
- Transportation Commission Minute Order from January 27, 2011
- TxDOT 2015-2018 Strategic Plan
- Environmental Handbook on Public Involvement

VALUES, VISION, MISSION, AND GOALS PAGE

TxDOT's website includes a page that clearly states the organization's values, vision, mission, and goals (Figure 4) (Texas Department of Transportation, n.d.). Amongst many ideals, mobility plays a central theme, exemplified in the mission statement: "Through collaboration and leadership, we deliver a safe, reliable, and integrated transportation system that enables the movement of people and goods." This emphasis on mobility is reiterated throughout the webpage in the vision statement and statements of goals and objectives. Documents of this kind are standard among organizations large and small, but they can nonetheless communicate a fundamental philosophy of how that organization defines its primary responsibility. In the case of TxDOT the thesis revolves around mobility and will be reinforced in other documents below. As this report will show, this focus on mobility is a significant determinant for how TxDOT makes decisions and works with stakeholders.

Mobility goes back to the scale conflict. Its focus is on volume and distance to the exclusion of any and all effects on locality. This is at the root of the conflict between TxDOT and Reconnect Austin. Mobility unchecked by accessibility and community interests results in projects like the Katy Freeway.

Values, Vision, Mission and Goals

[Home](#) > [Inside TxDOT](#)

Values:

People

People are the Department's most important customer, asset, and resource. The well-being, safety, and quality of life for Texans and the traveling public are of the utmost concern to the Department. We focus on relationship building, customer service, and partnerships.

Accountability

We accept responsibility for our actions and promote open communication and transparency at all times.

Trust

We strive to earn and maintain confidence through reliable and ethical decision-making.

Honesty

We conduct ourselves with the highest degree of integrity, respect, and truthfulness.

Vision:

A forward-thinking leader delivering mobility, enabling economic opportunity, and enhancing quality of life for all Texans

Mission:

Through collaboration and leadership, we deliver a safe, reliable, and integrated transportation system that enables the movement of people and goods.

Goals and Objectives:

Deliver the Right Projects – Implement effective planning and forecasting processes that deliver the right projects on-time and on-budget.

- Use scenario-based forecasting, budgeting, and resource management practices to plan and program projects.
- Align plans and programs with strategic goals.
- Adhere to planned budgets and schedules.
- Provide post-delivery project and program analysis.

Focus on the Customer – People are at the center of everything we do.

- Be transparent, open, and forthright in agency communications.
- Strengthen our key partnerships and relationships with a customer service focus.
- Incorporate customer feedback and comments into agency practices, project development, and policies.
- Emphasize customer service in all TxDOT operations.

Foster Stewardship – Ensure efficient use of state resources.

- Use fiscal resources responsibly.
- Protect our natural resources.
- Operate efficiently and manage risk.

Optimize System Performance – Develop and operate an integrated transportation system that provides reliable and accessible mobility, and enables economic growth.

- Mitigate congestion.
- Enhance connectivity and mobility.
- Improve the reliability of our transportation system.
- Facilitate the movement of freight and international trade.
- Foster economic competitiveness through infrastructure investments.

Preserve our Assets – Deliver preventive maintenance for TxDOT's system and capital assets to protect our investments.

- Maintain and preserve system infrastructure to achieve a state of good repair and avoid asset deterioration.
- Procure, secure, and maintain equipment, technology, and buildings to achieve a state of good repair and prolong life cycle and utilization.

Promote Safety - Champion a culture of safety.

- Reduce crashes and fatalities by continuously improving guidelines and innovations along with increased targeted awareness and education.
- Reduce employee incidents.

Value our Employees – Respect and care for the well-being and development of our employees.

- Emphasize internal communications.
- Support and facilitate the development of a successful and skilled workforce through recruitment, training and mentoring programs, succession planning, trust, and empowerment.
- Encourage a healthy work environment through wellness programs and work-life balance.

Figure 4: TxDOT Values, Vision, Mission, and Goals

PUBLIC ENGAGEMENT ACTIVITIES UPDATE REPORT

An interview was requested with TxDOT Project Development Manager Karen Lorenzini for further information on how TxDOT determines success and works with stakeholders. In response to that request, Ms. Lorenzini forwarded the document Mobility Investment Priorities Project Report titled “Public Engagement Activities Update,” which she co-authored.

Three issues are of particular interest about this report as it pertains to this report. The first is the impetus for how the report was created, the second is the authors’ sense of the objectives for public engagement activities, and the third is the report’s focus on mobility.

The Executive Summary of the report explains how it came to be:

Recognizing the growing urgency of the traffic congestion problem, the 82nd Texas Legislature set aside \$300 million to get the state’s highest-priority roadway projects moving, beginning with those segments identified as the 50 most congested roads in the state in 2010. In order to accomplish this task, as a part of the General Appropriations Act (H.B. 1, TxDOT Rider 42), the Legislature directed the Texas A&M Transportation Institute (TTI) to provide assistance to the metropolitan planning organizations, the TxDOT District offices and other project partners in their development of projects and programs to address mobility concerns and to report to the Texas Legislature and the

Transportation Commission. (Fette, Geiselbrecht, & Lorenzini, 2013, p. 1).

The excerpt serves as a reminder of two important relationships that define TxDOT as an organization. The first being that is an executive branch agency subject to ongoing legislative guidance and the second is the close consultative relationship it maintains with the Texas Transportation Institute. As will be discussed in more depth below, relationships such as these add to the unique circumstances TxDOT must contend with when attempting to address the needs of its stakeholders.

The second item of importance, is how the authors reflect their understanding of the objectives of public engagement. The report revisits the previous year's report that

reviewed progress toward public engagement for the regions at that time, presented best practices and case examples, and offered recommendations to help agencies ensure that their public engagement activities are meaningful, credible, productive and successful (Fette, Geiselbrecht, & Lorenzini, 2013, p. 1).

The titular intent of both the 2012 and 2013 reports is public engagement, so it is noteworthy that virtually the entirety of the report focuses on information push-out as opposed to information gathering. While the excerpt above uses powerful criteria for improving public engagement, their understanding of what public engagement is less one of dialogue and collaboration than one of instruction. That is, the authors' overall effort

revolves around how best to educate the public on the impending transportation crisis in Texas, and in particular how to effectively persuade them to support funding projects deemed to be best solutions for mobility.

As a means of addressing what the authors identify as the underlying problem of the public being “unaware of and unengaged in any potential solutions to address the mobility challenge arising from the state’s ‘perfect storm’ of increasing jobs and population, aging infrastructure, and declining funding projections” (Fette, Geiselbrecht, & Lorenzini, 2013, p. 1), the authors identify the original 2012 report’s first four (of eight) principles as the most appropriate state-level steps:

1. Initiate a broad public discussion to raise awareness of the state’s mobility crisis and to begin building public consensus toward solutions.
2. Sustain the discussion through means of an assertive public education campaign to help citizens and voters understand the magnitude of the state’s mobility crisis and the consequences of inaction.
3. Communicate with all stakeholder groups content that is based upon polling results and project information produced through the [Mobility Investment Priorities] project.
4. Continue polling to ensure that changes in public opinion are understood and reflected in ongoing public engagement efforts.

To address what the report refers to as the perfect storm caused by increased driving and

decreasing revenue for transportation funding, the authors point to TTI's plan Rethinking

Our Path to Mobility which intends to:

- Convey that the state's growing population and shrinking revenue forecasts are requiring us to reconsider how Texas provides and pays for the roadways upon which our economic prosperity and quality of life depend.
- Emphasize that finding the best path forward is achieved through public understanding of our challenges and options and public support of solutions.
- Reinforce that greater mobility is the ultimate goal.
- Employ a well-recognized visual element – a vehicle's tachometer – to establish a picture for program audiences that is memorable and helps to build and sustain the program's identity and purpose.
- Establish the ownership and sponsorship of the program through a broad collection of statewide and local leaders in each region (see grassroots network below, "movers and doers"). The intent is to position this effort as something distinct, and to insulate the effort from audience biases toward TxDOT or other entities which may have developed over time.

The main points to highlight here are again the focus on education of what is already assumed by the writers, and mobility as the ultimate goal. This perception of public involvement reinforces what interviewees expressed regarding the case studies. Both in Austin and Houston, TxDOT did not seem to be interested in forming a dialogue with the public, and the main interest of TxDOT was on long-distance transportation rather than the local community. Only in the case of the Woodall Rodgers Freeway did the local community find success in capping that freeway with the Klyde Warren Park, and that was due to a successful private, public partnership within the local community.

TRANSPORTATION COMMISSION MINUTE ORDER FROM JANUARY 27, 2011

TxDOT is governed an executive director, James M. Bass, TxDOT and the Texas Transportation Commission, comprised of four commissioners and a chair (Texas Department of Transportation, n.d.). In December of 2010, the Center for Transportation Training and Research of Texas Southern University released a report making recommendations to TxDOT for improving their public involvement process. The following month, the Texas Transportation Commission issued a minute order declaring that TxDOT will follow those recommendations as detailed in the order's Exhibits A and B.

Exhibit A of the document "Public Involvement Recommendations" lists eight recommendations, the introductory statements of which are listed here:

1. Continue to cultivate a culture of early outreach that welcomes comments and input from the public.
2. Prepare a written debriefing assessment of each meeting.
3. Develop a response mechanism.
4. Create a compendium of best practices and success stories available on the TxDOT website.
5. Increase use of non-traditional outreach and involvement strategies.
6. Develop and make widespread use of a template of meeting styles and types.
7. Be careful about nomenclature and published descriptions.
8. Require public involvement retooling (Texas Transportation Commission, January, 2011).

These recommendations focus significantly more on gathering input from stakeholders, rather than delivering information to the public. The Director of the Office of Public Involvement Jefferson Grimes referred to the order as establishing “the overarching policy on public involvement that guides the agency efforts” (Grimes, 2016).

TxDOT 2015-2019 STRATEGIC PLAN

In TxDOT’s most recent strategic plan, there are three things that are of particular interest for the purposes of this report, the first and last of which are interesting because of their conspicuous absence from the document.

- Public Involvement
- Travel Time Index
- Success Metrics

Public Involvement

Not once in the strategic plan is public outreach, engagement, or involvement ever mentioned. Instead the plan is focused primarily on budgetary issues. While the mission statement given in the plan—different from that on their website—is, “Work with others

to provide safe and reliable transportation solutions for Texas,” throughout the rest of the plan, it is implied that “others” are government officials, consultants, or contractors. The general public or individual community stakeholders are never included in that group in term of planning and implementation.

Travel Time Index

Travel Time Index is a traffic flow metric used by the Texas Transportation Institute of Texas A&M University. In an introductory section of TxDOT’s strategic plan titled “Relevant Texas State Goals and Benchmarks,” under the sub-section “Economic Development” two benchmarks are listed as a means of addressing the priority goal to provide “an attractive economic climate for current and emerging industries and market Texas as a premier business expansion and tourist destination that fosters economic opportunity, job creation, and capital investment.”:

- Percentage of state highway system rated good or better based on the Pavement Management Information System Condition Score
- Percentage reduction in traffic congestion using the Texas Transportation Institute’s Travel Time Index (Texas Department of Transportation, July 7, 2014, p. 2).

Use of the Travel Time Index (TTI) is indicative of the scale disconnect between TxDOT and its stakeholders. Whereby community stakeholders’ interests are in accessibility and

maintaining and promoting local business and culture, TxDOT's focus often lies in the most rapid movement of vehicles over the greatest expanse of land.

TTI does not capture long-term effects or the range and variety of externalities associated with traffic. TTI in essence looks at traffic as a snapshot in time. The following is the equation for TTI (Cortright, Measuring Urban Transportation Performance: A Critique of Mobility Measures and a Synthesis, 2011, p. 8):

$$\text{TTI} = \text{Congested travel time} / \text{Travel time without any congestion}$$

Most problematic with this equation is the fact that this means

[B]ecause the Travel Time Index is computed as a ratio where the denominator is the total amount of time spent traveling, places with longer average trip lengths will have lower travel time indices. All other things being equal, if trips get longer (say the average commuter adds 5 more minutes to their trip), the larger will be the denominator in the equation, and the lower will be the Travel Time Index. Conversely, cities that shorten their average trip lengths will, all else equal, see an increase in their Travel Time Index (Cortright, Measuring Urban Transportation Performance: A Critique of Mobility Measures and a Synthesis, 2011).

In other words, using TTI promotes sprawl and penalizes more compact cities. As the standard metric used by TxDOT, it establishes how that organization sometimes views

transportation as an isolated issues, untouched by other other factors like land use or productivity.

The problem of traffic congestion appears elsewhere in the strategic plan, and when it does it helps to clarify TxDOT's perspective on the problem. In a subsection that defines TxDOT's role in addressing congestion, the plan states:

The state and its local government partners must work together to expand the capacity of our transportation systems. But that alone will not solve the problem. We must find smart ways to manage the growth of congestion by increasing the efficiency of our existing roadways, looking for multi-modal solutions, and targeting improvements that hold the greatest potential for long-term, system-wide impacts (Texas Department of Transportation, July 7, 2014, p. 9).

Of interest in this excerpt is the primary focus on increasing capacity and then the recognition that other solutions are also necessary. However, when TTI is the metric the conclusion will always be to use the fire hose. That is, if the objective is inevitably “far and fast,” the meaning of “greatest potential for the long-term” is rather murky or at least confined to the limited world of mobility. The kind of solutions recommended by groups like Reconnect Austin and actually implemented in the case of Klyde Warren Park are of no interest to TxDOT because those projects, are about accessibility and community, which are out of scope for an organization that operates an entirely different scale.

Success Metrics

Which leads to the third item of interest in the strategic plan: the metrics that are defined in the report for determining success. For each overarching goal identified in the plan there are objectives, which in turn have corresponding outcome measures. The definitions of these output measures are noteworthy in terms of public involvement because there is no intention to capture how TxDOT is positively affecting actual stakeholders. That is to say, with the exception of measuring number of fatalities per 100 miles traveled as a metric for Optimizing Services and Systems, human beings do not seem to be a consideration in any of the outcomes.

Instead the outcome measures are focused on engineering metrics. For instance, corresponding to the objective Effective Planning and Design, the output measures are “Percent of Design Projects Delivered On time,” and “Percent of Funds Allocated to Improve the Top 100 Most Congested Roadway Segments.” Under the goal Implement Transportation Improvements and the objective Construction and Reconstruction the outcomes are “Percent of Construction Projects Completed on Budget,” “Percent of Two-Lane Highways with Pavement 26 Feet or Wider,” “Percent of Construction Projects Completed On Time,” and “Percent of General Aviation Pavement in Good or Excellent Condition.”

The one budgetary outcome that goes beyond the confines of engineering is “Percent Change in the Number of Small Urban and Rural Transit Trips.” The corresponding budgetary goal and objective respectively are “Optimize Services and systems,” and “Support Enhanced Public Transportation.” The outcome is limited to small urban and rural transit apparently because certain agencies that support non-metropolitan public transit systems receive funding from TxDOT (Texas Department of Transportation, July 7, 2014, p. 68). Leaving one to come to the conclusion that public transit for cities falls outside the domain of TxDOT’s goals. This outcome metric also points again to TxDOT’s focus on growth as the ultimate good. The percent increase in ridership is not in and of itself a good thing unless of course the goal is increased revenue from riders. It may indicate a conversion from single-occupancy car drivers to transit, but that is not what TxDOT is attempting to measure. It seems at least from TxDOT’s perspective that increased ridership is what defines Optimal services and system, and perhaps this would be the only way to measure such a goal, when it is detached from benefits experienced at a more human or community level.

We see this lack of depth in reflected in the engineering metrics as well. Here the goals and objectives help to highlight the ethos of TxDOT. When creating goals for an organization the question that must be answered is “To what end?” and for TxDOT those answers seem to inevitably land in the realm of construction rather than in aid of a community. TxDOT fails to go deep enough when answering important existential

questions, and the result is a strategic plan that is a circular argument—they will build more and better infrastructure because they are meant to build infrastructure.

ENVIRONMENTAL HANDBOOK ON PUBLIC INVOLVEMENT

Like the Transportation Commission Minute Order, this handbook is explicit in its intent to actively engage the public, with guidance that seems sincere in its efforts to gather useful feedback from stakeholders that can be incorporated into plans and projects. Jefferson Grimes describes it as “part of the toolkit utilized throughout the agency by our NEPA [National Environmental Policy Act] practitioners” (Grimes, 2016).

The handbook describes the purpose of public meetings thusly:

A public meeting is held to exchange ideas and collect input on the need for possible alternatives to, and potential impacts of, a proposed project. Public meetings are intended to gather input from the public and to keep the public informed during any project phase. Public meetings provide early and continuing opportunities during project development for the public to be involved in the identification of social, economic, and environmental impacts and impacts associated with the relocation of individuals, groups, or institutions. There is no limit to the number of public meetings that may be held for a project.

Note that a public meeting is a traditional method of public involvement; however, in many cases it is not always the most successful in terms of citizen participation. Additional public involvement techniques, such as online open houses,

should be considered during project development (Texas Department of Transportation, August, 2015).

The handbook goes on to encourage using a variety of methods to engage the public and capture their feedback, reflecting a proactive approach to engagement.

The title page explains that the purpose of the handbook is to “outline the public involvement process steps necessary to comply with State and federal requirements during the environmental phase of project development” (Texas Department of Transportation, August, 2015). This statement and Grimes’s description of this handbook seem to limit the influence of the document to the environmental aspects of TxDOT’s obligations. It also points to TxDOT’s restrictive vision when it comes to how it does business. This philosophy of proactive public engagement does not cross the boundary of what is required of them by the EPA, and one wonders if it would exist at all if it were not imposed on them by that regulatory agency.

GUIDING DOCUMENTS SUMMARY

In comparing the sets of documents, to some extent the efforts for public involvement are at odds with other efforts within TxDOT. The documents referred to by the Office of Public Involvement reflect a commitment to interacting with stakeholders to exchange information in an effort to realize best results for all stakeholders, but as the director of

that office pointed out in his interview, he is a communications specialist in an organization made up chiefly of engineers (Grimes, 2016). What the Office of Public Involvement is charged with doing and what other areas of TxDOT are charged with doing seem to be different things.

Outside of the Office of Public Involvement the objective is one of successful construction and maintenance of infrastructure, which in and of itself will seem an obvious goal for those charged with building that infrastructure. What they do not seem to be concerned with, outside of the Office of Public Involvement and TxDOT's "NEPA practitioners," is whether that transportation infrastructure is what is in the long-term best interest of their local community stakeholders (outside of environmental issues) or whether it is indeed satisfying the input provided by those stakeholders. If TxDOT does not believe those interests are within scope of its mission, then one must wonder who's responsibility it is. Using the Austin I-35 case study as an example, it would seem apparent that TxDOT sees the local community and local transportation authorities as the responsible parties for local issues, but that hardly points to a resolution. In fact, it is the reason for conflict, as TxDOT's long haul transportation goals are inextricable from local issues of transportation and the health and well being.

It is important to recognize that the Office of Public Involvement is a relatively new one, created in 2012 (Texas Department of Transportation, August, 2015, p. 5). For such a

large organization with a long history, it would take a good deal of time for a new department to have significant influence on culture and practice.

What is missing from documentation out of the Office of Public Involvement is more specific information on how to effectively involve the public and explicit definitions of success for that purposes. While there are references in the documentation to diverse methods and even mention of using specific visualization tools (Texas Transportation Commission, January, 2011), there are no documents that provide event facilitators with templates, tools, or metrics. Furthermore, whether public involvement is being successful in their efforts cannot fully be known unless TxDOT develops some metric for success. Grimes was aware of this during the interview and said that he was looking into solutions, some of which will be suggested in the following section.

But the purposes of documenting public engagement practices and policies it would be useful to articulate the reasons for the practice. For planning purposes, public engagement is essential for three reasons (Haggett, 2011, p. 16):

1. Involving the public in decision-making reduces the likelihood of opposition from the community and will likely lead to more competent decisions.
2. It is the ethically right thing to involve the public in planning a project that will directly or indirectly affect them.

3. Community stakeholders possess a knowledge that may not exist anywhere else could prove to be invaluable to project outcomes.

Evidence that TxDOT may be struggling in the public engagement came to light in the interview for Houston's Grand Parkway. During public engagement events, facilitators from TxDOT were warned about the regular flooding of the Brazos River in the area known as Segment C. According to the interviewee, those warnings were ignored as shown in the implementation of the project.

Without thorough documentation of public involvement processes and articulated metrics that define success, TxDOT will resort to what is known as the "conventional approach" to development in which:

Negatively affected stakeholder groups and the general public are involved only to a limited extent and at a late phase of the project cycle. Input from stakeholder groups and the public is under-utilised, for instance in setting performance standards. Public dissatisfaction with projects may increase owing to the simple fact that stakeholder groups and the public are under-informed and feel left out (Flyvbjerg, Bruzelius, & Rothengatter, 2003, p. 87).

That TxDOT is following the conventional approach is corroborated by the process they follow, which is explored further in the following section.

Current TxDOT Practices

This section focuses on TxDOT's use of tools and methods for public engagement in refining plans for particular highway projects in Texas cities. Information was gathered through interviews from four anonymous representatives from community stakeholder groups, and a telephone interview with TxDOT's Director of the Office of Public Involvement, Jefferson Grimes.

The overall strategy used by the Office of Public Involvement is based on the 2011 Transportation Commission Minute Order discussed above (p. 19). In short, as was also reflected by Grimes, the office aims for early, continuous, and transparent communication with the public during planning of transportation projects.

Grimes explained that the use of graphic presentations are an important tool for helping stakeholders understand proposed plans for transportation solutions, and that the office is focusing on increasing visualization efforts. They are also using maps and aerial images without demarcations, to help get input from the public without prior influence from planners. The result of using visuals early and continuously throughout the process, Grimes said, has shown that there are fewer change orders during implementation of the project, which is a useful metric for TxDOT for determining how effectively they gathered and incorporated public input into a plan before implementation. However, he

would like additional quantifiable methods for determining successful public outreach efforts. Currently feedback has been subjective and anecdotal. For instance, a favorable indicator would be when stakeholders have expressed that they have felt that they were heard during the event.

While participants' perceptions of the event may be of some interest, it does not provide useful data for long-term effectiveness. Participants may have favorable experiences during the event, but if they eventually find that the project did not incorporate their input or they are generally displeased with the project outcome, they will come to be contemptuous of the process. The focus for the Office of Public Involvement, in other words, needs to be more on how the participants feel after implementation, so as to avoid a practice of merely placating participants in the short-term. Grimes expressed that he was interested in developing follow-up surveys, and if that does happen, those surveys should capture stakeholders' impressions of how public involvement events effectively influenced a project's outcomes.

The stakeholder interviews for this report corroborate the tools and practices Grimes described, however all interviewees felt a consistent frustration in terms of effectiveness. While the number of events held for projects were numerous, interviewees felt that the way the event was designed did not allow for actual critical discussion with stakeholders. For instance, events were organized so that participants were required to register for comment at the beginning of the event, and when they did make a comment it was

recorded by organizers, but there was no interchange of ideas or further clarification of an issue. Instead, the practice was to gather all input and respond through a formal document or event at a later date.

Interviewees also expressed a significant level of distrust toward TxDOT that stemmed at least in part from their experiences in public involvement events. Although interviewees either vocalized their own thoughts and concerns or witnessed others doing so, it seemed to have little to no influence on projects. The belief amongst these interviewees was that TxDOT's obligations to the state legislature and that body's ties to development lobbyists far outweighed any influence the general public could have on a large-scale transportation issue.

The underlying process in which TxDOT approaches planning supports this perception. Specifically, the sequence of steps that TxDOT follows in the planning stage sets the stage for community stakeholders to become skeptical about any given project.

In general practice—outside of TxDOT—when working with stakeholders, a planning process is one of an exchange of ideas to find a common ground among all parties. In the public sector there is an established process for bringing an idea through to implantation. William D. Eggers and John O'Leary, in their book *If We Can Put a Man on the Moon*, point to what they argue is an established model for successfully bringing an idea through to fruition (Figure 5). Calling it the Universal Journey to Success, the model shows that

an idea triggers the process and then a solution is designed. Once a viable solution is developed, the process goes through what they call Stargate, which is securing buy-in and approval from a governmental authority such as the legislature. Only then can the plan be implemented.



Figure 5: Universal Journey to Success (Eggers, 2009, p. 11)

Ideally, as is the case with land use planning, ideation and design involve the public as it is the public who will ultimately be served with a successful outcome, but in the case of TxDOT's process, the sequence is quite different, as illustrated in Figure 6. Ideation and design phases can take place without community stakeholders as TxDOT assesses roadways for problems and potential for improvement and works with consultants, contractors, and the legislature for solutions. Although TxDOT must get state and federal approval for project, the buy-in or Stargate phase for them is actually where public involvement takes place. The relationship with the public is more similar to selling a product to customers, but even that analogy fails to capture the true nature of the relationship because in this case even if the customers do not want to buy, they still might receive the product.

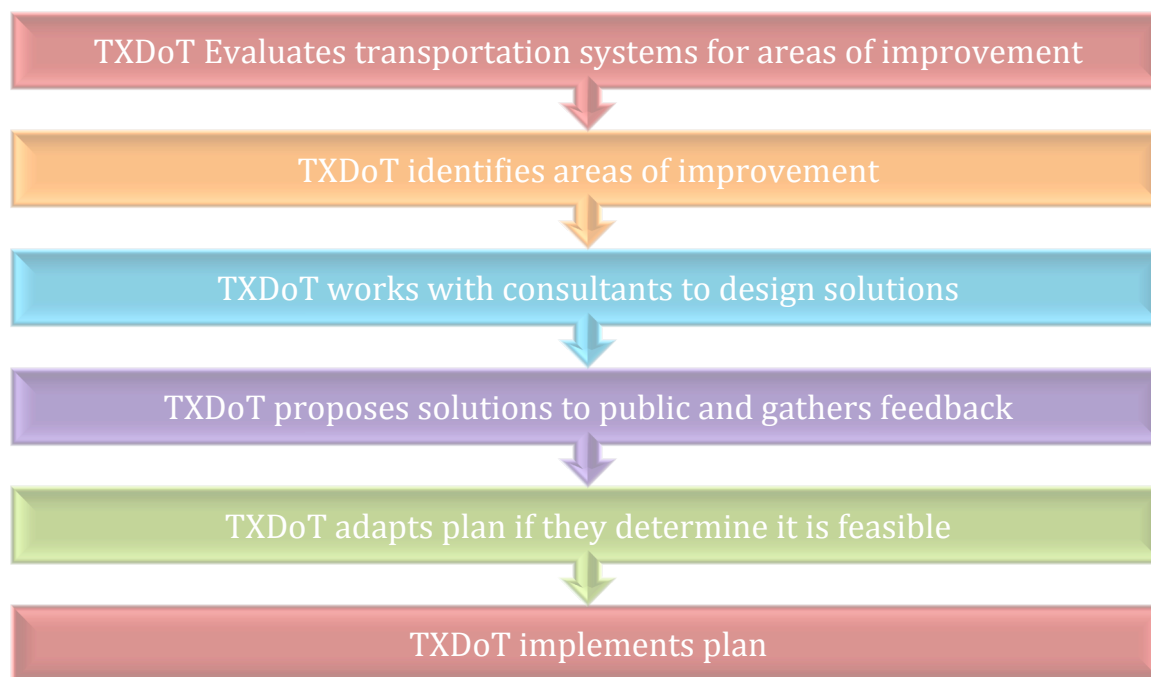


Figure 6: TXDOT Idea to Fruition Process

After idea initiation, the design process takes place without community stakeholders, and could include legislative offices or a consultant like HNTB, that bills itself as an “infrastructure solutions firm” (HNTB, n.d.). This sort of arrangement prior to community stakeholder involvement has the potential to narrowly focus the options for solutions. HNTB, for example, has a financial interest in construction of new infrastructure. In 2015, HNTB Holdings spent \$370,000 on lobbying (Open Secrets, n.d.). Early collaboration with state representatives could also pose problems. In terms of influence that might conceivably lead legislators to endorse projects that require massive transportation construction like highway expansion, in 2015 the construction industry spent \$10,893,698 on lobbying, the automotive industry \$58,638,623, the trucking

industry \$8,485,480, and oil and gas industry \$129,711,004 (Open Secrets, n.d.). Regardless of whether these special interests are essentially able to by influence on transportation projects through the legislature, when coupled with the fact that legislature is placed before public involvement in the planning phase, it will be difficult for the public to trust the TxDOT.

This type of concerted influence on designing a solution prior to any discussion with community stakeholders is likely to have an adverse affect on developing a solution that is truly open to allowing community stakeholders to participate in the planning process. Moreover, the relationship TxDOT has with the industries that currently serve as initial collaborators is dysfunctional. One might liken it to a physician collaborating with the tobacco industry. It may ensure a steady stream of patients but it also nullifies what should be the physician's greatest obligation.

Here again we can see evidence that TxDOT is using the conventional approach to development resulting in inadequate decision making and ultimately inferior projects outcomes.

[A] problem with the conventional approach to decision making for major transport infrastructure projects is that this approach tends to be characterized by close interaction between the political and government establishment on the one side, and the private business on the other. Citizens who are directly affected, other stakeholder groups who are

concerned with the outcome of the process and the general public are not involved, or are only involved to a limited extent. Such parties also tend to receive information at a late stage, when the groups who primarily influence the decision have reached their agreement. This lack of public involvement, combined with the involvement of special-interest groups who stand to benefit from the project, increases the risk of capture of the decision-making process by these interest. Politics is and should always be based on other input than expert analyses, but capture by special-interest groups often results in feasibility studies and other analyses becoming irrelevant in deciding whether or not to go ahead with a project, and in determining which alternative to build, since special and not public interest becomes the decisive factor (Flyvbjerg, Bruzelius, & Rothengatter, 2003, p. 88).

The case studies for this report and the corresponding interviews support these findings. The Katy Freeway had no public involvement that the interviewee could recollect, and the Grand Parkway was pushed through largely by political influence with late-stage public involvement that was largely ignored. In the case of the Katy Freeway, the project is a massive build-up that ultimately failed to realize its objective of reducing congestion. In the case of the Grand Parkway, we have yet to see the opening of the full beltway, but the interviewee reports discontent among stakeholders who feel they were not heard.

On the other hand, Klyde Warren Park, which is viewed as a success, bridged the divide between public and private, rather than putting those parties at odds with one another. And finally, in the case of I-35 in Austin, the public was presented with solutions

already developed by TxDOT, which resulted in a backlash against the project from the public claiming that TxDOT is doing the city of Austin a disservice.

It is important to note here that Reconnect Austin suffered from the same public involvement mistakes made by TxDOT. Because of Reconnect Austin's knowledge and background with the local community and the well-known problems created by I-35 along the Austin corridor, Reconnect Austin made certain assumptions about what the local community would find agreeable. They then drew up plans and presented them without first reaching out to certain influential neighborhood groups and leaders. The result again was a backlash from some community members and a certain amount of misunderstanding and distrust toward Reconnect Austin.

Other Industry Public Involvement Methods

Other industries can typically engage stakeholders without the same constraints that affect TxDOT's practices. While TxDOT has adopted many common practices such as setting clear values, vision, mission, and goals; hosting events with interactive tools; and employing a wide-range of media to attract participants, the organization also is limited in how it uses these and other tools available to them.

For instance, in land use planning, it is common to have a more rigorous exchange of ideas with stakeholders using a tool known as a "charrette." The National Charrette Institute defines a charrette as a multi-day, collaborative planning event that harnesses the talents and energies of all affected parties to create and support a feasible plan that represents transformative community change" (National Charrette Institute).

Stakeholders in land use planning are viewed as clients whose needs must be interpreted in order to realize the vision. Before planning even begins, a stakeholder analysis is done to ensure that all voices are represented in the process. Participating stakeholders then develop the participatory process and determine objectives together. This method keeps the process transparent, immediately engages the participants, and establishes trust (Paterson, 2016).

There is a nuanced difference here from the way TxDOT works with stakeholders. For transportation issues, there is a greater need for technical exposition. While engineering and regulatory expertise are certainly important elements of land use and local planning, there is additional complexity when it comes to regional long-distance planning.

Charrettes are used at a certain scale and one objective is to ensure all experts are in the room to make important decisions. Transportation projects and issues are currently viewed not only on a different scale, but one that does not consider any other scale. As it stands, this would pose a problem for the traditional charrette model, but as the Recommendations section of this report will show, there may be a way to adapt charrette tools and concepts to suit transportation planning.

Ramifications of highway projects are far-reaching in terms of time and space, potentially affecting the economy, environment, and other communities of which individual stakeholders may not be fully aware. While TxDOT aims to educate the public on these issues, the fact that the organization has information that the general public may not fully understand puts them in position to move forward without the stakeholders fully understanding. They have the power to make the assessment that the project is for the greater good. For land use planning, ultimately it is a well-defined client population who must be satisfied. For TxDOT, that client population is ambiguous.

In land use planning, where there is local political oversight and consent comes directly from representatives who live and work in that community, stakeholders are engaged at the earliest stages of planning. Failure to do so can cause animosity and distrust among stakeholders, setting a project back or halting it altogether. This raises an important aspect of TxDOT's relationship with its stakeholders. Land use planners, whether they are private or public, are in a relationship that is dependent on working with stakeholders. Although in some cases, developers may have a great deal of power in terms of forcing a project through, local stakeholders, generally speaking, also have a great deal of leverage in terms of steering a project. The stakeholders for land use planning are directly affected by the project and except in cases involving environmental or water rights issues are not likely to have opposition from some other remote population. Moreover, local market forces drive the decision-making process and what the people want and need is a significant element within that process. TxDOT on the other hand, has a mandate from the state to follow its mission. This fact alone may allow any organization to move forward, consciously or not, with a disregard for other potential influential factors. A state mandate that focuses on the rapid movement of vehicles through an entire state, in other words, can make it difficult to justify satisfying the needs or wants of people living on the periphery of highways.

Consultants for organization effectiveness speak of a distinction between compliance and commitment when helping clients through change management (Linkage, 2012, pp. 3-3).

The level of engagement an organization wants its employees to attain is “commitment,” as those who are committed will help drive the project forward. TxDOT’s statutory obligations, as we’ll discuss later, allows them to settle on a compliance-level for stakeholders. That is, engagement need not be about getting stakeholders to commit to a project, but rather to simply placate them to accept a forgone conclusion. This is reflected in the guiding documents discussed above where the delivery of a message far outweighs the gathering of input from participants.

Another principle important for consultants working with public and private organizations is to initiate and remain impartial when gathering information. In addition to avoiding cognitive bias, impartiality aids the information gathering process and helps ensure commitment from the client. Failing to create an environment in which clients believe they are being heard rather than steered toward a conclusion, will not only hinder the consultant in making a complete assessment, but will likely cause the client to actively resist the planning and implementation process, resulting in either an unnecessarily protracted timeline or a complete process breakdown.

Seasoned consultants are able to avoid directing clients in a given direction, but there are tools and concepts that can help facilitators gather information without consciously or subconsciously pushing clients toward a given idea or solution. Some of these concepts are exemplified in the tools used in the practice of mediation, which will be discussed in the recommendations section below.

Missing Factors Under Current TxDOT Model

The effects of transportation are far-reaching, yet during public events and the planning process important considerations are not part of the discussion. Much of this may have to do with how TxDOT defines its mission, the methods used during outreach events, and the siloed nature of the Office of Public Involvement, but on a fundamental level, it is TxDOT's sheer determination to increase traffic flow that blinds the process to serious issues that are inextricably tied to transportation. By not considering these issues, TxDOT is at best not developing the best transportation solutions for Texas, and at worst creating harm to those communities they are meant to serve.

Missing factors under the current TxDOT model:

- Economic Inequality
- Economic Segregation
- Land Use
- Accessibility

At the end of this section, is a summary that elaborates on how these missing factors tie into the importance of public involvement process.

ECONOMIC INEQUALITY

As residential development increases away from the urban core, people are increasingly removed from places of employment, spending more of their income on transportation,

and spending more unproductive time away from family and friends. This has a significant effect on people's pocketbooks. The cost burden for commuting alone (as opposed to all transportation costs) for the typical American worker is 3.8% of their income, but for the poor who drive to work that burden increases to 8.4% (Roberto, February 2008, p. 1). But of course people drive to more than just work. According to the Bureau of Labor Statistics' Consumer Expenditure Survey program, the lowest 20% of income earners spend 32% of their income on transportation (Bureau of Labor Statistics, 2016). This disproportionate expense on transportation makes it difficult for the poor to move out of poverty, especially when there is poor access to better employment opportunities.

Proximity to employment is especially important for low-income workers, who may have fewer choices about where to live, or how to get to work (given the cost of owning and maintaining a car). Finally, nearby jobs also support the local tax base for schools and other critical public services that support social mobility (Homes & Berube, 2015).

Highway infrastructure may have provided access to far-off suburbs, but it has also created a dependency on the automobile. In doing so, it boxes in the poor at both ends: acting as an obstacle to income by distancing people from jobs, and then forcing them to pay such a high portion of their income on transportation that it traps them in a state of poverty.

[T]he sorting of economic classes across space in American metropolitan areas both promotes rising economic

inequality and amplifies its effects in ways that do not show up in the income statistics (Swanstrom, Dreier, & Mollenkopf, 2002).

Historically, in cities, highways have exacerbated economic inequality by running the infrastructure through already disadvantaged neighborhoods in what is known as urban renewal (Stromberg, Joseph, 2016). This made many of the cities' amenities inaccessible to the poor who could not afford a car and, and those who could were forced to pay a high portion of their income on transportation. Now, however, demographics are shifting. As cheap housing stock continues to grow far from the urban core, and housing demand increases in cities, the poor are moving to the suburbs. "Between 2000 and 2012, the number of suburban poor living in distressed neighborhoods grew by 139 percent..." (Federal Highway Administration, 2014, p. 3). Lured by affordable housing, they set themselves up for financial hardship in the long-term due to an increasing dependency on transportation and further segregating themselves from other populations that could provide opportunities for growth.

ECONOMIC SEGREGATION

While highways certainly did not create segregation in the U.S., they have reinforced it in a way that makes integration exceedingly difficult. More than a symbolic divide, railroad tracks, or even a natural element like a river or stream, a highway is massive structure of

concrete and steel guarded by tens-of-thousands of vehicles rushing by per day. Highways are a clear and formidable dividing line.

Like many cities across the country, the decision where to place the interstate running through cities was based largely on how the city was divided by race, and therefore economic status (Zehr, 2015). Now Austin is one of the most economically segregated cities in the nation (Florida & Mellander, 2015, p. 27). In fact, “Four of the ten most segregated large U.S. metros, those with populations of one million or more, are in Texas: Austin, San Antonio, Houston, and Dallas. Almost all of the most segregated smaller metros are college towns” (Florida & Mellander, 2015, p. 9).

The implications of the economic segregation are dire. Segregated communities with high concentrations of poverty are communities without connections to opportunities to move out of poverty and improve the community as a whole.

Economic segregation affects both people’s ability to get a job and their overall level of income. Living in a concentrated poverty neighborhood undermines workforce participation primarily in two ways: (1) by accentuating the physical distance between place of residence and jobs and (2) by limiting access to networks that link people into job opportunities (Swanstrom, Dreier, & Mollenkopf, 2002, p. 352).

Regardless of whether or not highways created this scenario across Texas and the rest of the country, it is hard to deny the barrier they create for communities. Moreover, economic segregation creates a negative feedback loop of dysfunction in which the solution used to cure the problem is actually just making the problem worse.

From society's viewpoint, however, economic segregation imposes large costs on the general public. Perhaps the biggest negative externality is suburban sprawl. The problems associated with growing concentrations of poor people, especially crime and poor schools, drive households to move further and further out into the suburbs. This creates inefficient land use patterns and requires the building of massive new infrastructure at the same time that central city and inner-ring suburban infrastructure is being abandoned. It also exacerbates traffic congestion, pollution, the time spent traveling from home to work, and the social and family consequences of long-distance commuting (Swanstrom, Dreier, & Mollenkopf, 2002, p. 364).

LAND USE

As reflected in the excerpt directly above, transportation and land use are part of an integrated system. It is impossible to plan for one without considering the other. Any development, whether it is residential, commercial, industrial, or recreational must also consider how people will get to and from that development. And any transportation project must consider how that new system, whether it is highways or bikeways, will

affect the properties through which it runs. It is simply impossible to reach optimal results for one without considering the other.

By not considering land use when planning for transportation, the result would be a highly inefficient use of land. Transportation would take precedent over all other considerations. And this is precisely what we have seen happening by focusing on moving cars through any given space. Sprawl development, a product of highway systems, increases land use consumption by 60-80% (Litman, 2015, p. 3), and car-centric planning uses vastly more space than any other mode (Figure 7).

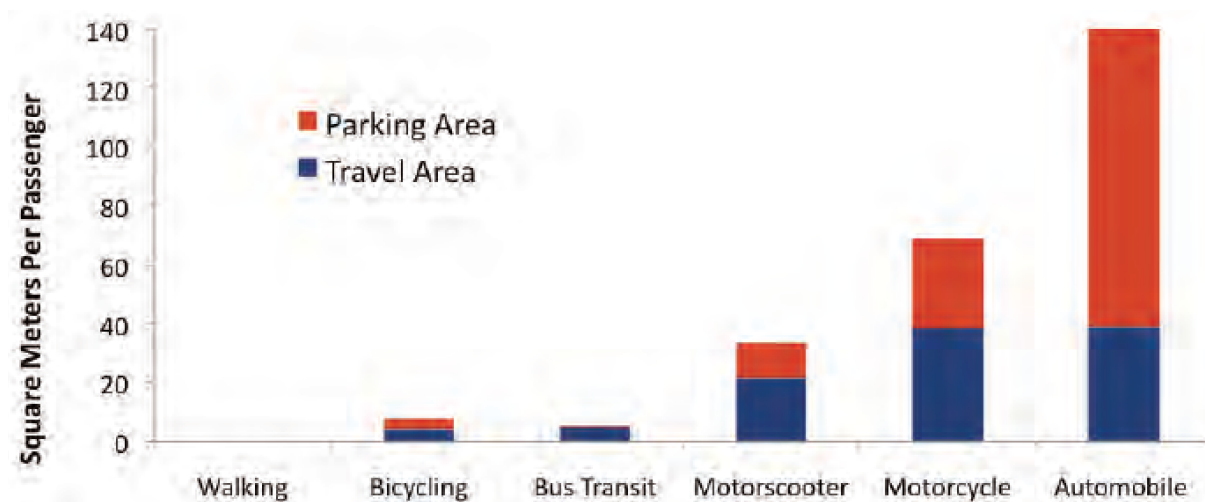


Figure 7: Space Needed for Transportation Modes (Litman, 2015, p. 14)

If TxDOT were required to make efficient use of space and developers were required to coordinate with transportation departments to ensure the most cost efficient use of space, the landscape of our cities and regions would look quite different as would the revenue and expenses flowing to and from those communities.

ACCESSIBILITY

As pointed out early in this paper when examining the documentation that guides TxDOT's public involvement methods, the notion of mobility is featured prominently in their philosophy. This may seem like an obvious function of TxDOT, but as an isolated criterion, it makes an assumption about transportation that locks them into how they develop solutions.

Mobility alone is about moving people and goods from one place to another, while accessibility is about allowing people to arrive at their destinations with minimal effort, obstruction, expense, and time. While TxDOT must consider mobility to arrive at transportation solutions, accessibility is an equally essential consideration.

Accessibility curbs invasive options by bringing land use into the equation. Accessibility allows for the consideration of minimal infrastructure for any given destination, while consideration of mobility alone will squash accessibility as a way of reaching the most expedient solution to any given transportation issue at hand. That is to say, by not taking land use into consideration, TxDOT is doing more than not addressing problems of accessibility, they are in fact creating and exacerbating problems.

SUMMARY OF MISSING FACTORS

Transportation affects the economy and that includes the local level. In fact, it is impossible to extricate the local economy from that of the state or nation, as they are each made up of one another. To fully understand how current transportation infrastructure is affecting local communities, and how future transportation projects may affect local communities, a productive dialogue must exist between TxDOT and those communities. Just as experts in engineering, policy, and economics are part of the planning conversation as experts, so too should community stakeholders be included.

The same thing is true for accessibility and land use. These are issues that can only be addressed at the local level and community stakeholders are one of group of experts that should be consulted during planning stages of transportation projects. Within this land use subject matter expert group, there are subsets of experts who should also be called upon, such as fair housing experts and advocates for historically marginalized populations.

Recommendations

TxDOT presents itself as being committed to involving the public in the planning process, and there is reason to believe that they are putting sincere effort toward that end. There are, however, distinct obstacles in how they approach public involvement that are keeping their outreach efforts from being successful. Below are four distinct recommendations for how TxDOT and other transportation planning groups, including Reconnect Austin, can more effectively work with community stakeholders to realize optimal transportation solutions.

Recommendations:

- Redefine TxDOT's mission
- Stop using the Travel Time Index
- Improve the gathering of information that affects public involvement
- Avoid conflicts of interest
- Improve public engagement methodologies and tools

REDEFINE TxDOT'S MISSION

Transportation planners must reframe their mission to de-emphasize the concept of mobility as the driving force behind their decisions and actions.

Specifically for TxDOT, foremost among areas that have room for improvement is the agency's assumption about how they can most effectively support their mission. Inherent

in this assumption is that they must provide for an increasing demand for long-distance travel. As shown above this may well be a paradoxical conclusion: their efforts to satisfy a perceived demand are actually creating the demand (Litman, 2015, p. 3).

TxDOT views their role in a framework analogous to industrial production. From their problem-solving approach and methods for public involvement their objective seems to be to provide as much flow of traffic as possible, the same way a factory would aim to maximize the production of goods. More vehicles flowing through a highway equates to more widgets produced on an assembly line. The problem with this is that the product they are creating is at least potentially toxic to a number of aspects any given community they are serving.

The goal, in fact, should not be to increase production, but to minimize it without doing undue long-term harm. In other words, TxDOT must consider mobility, but within the context of accessibility. Mobility alone limits TxDOT's ability to see transportation as one element in a complex universe of urban and regional planning. It may be that the transition away from a system that is not exclusively dependent on highways or frequent long-distance travel is painful, but that is a matter of proper change management for the greater good.

Part of this shift means defining who TxDOT's customers are and what communities TxDOT serves. This goes to the question of scale in that current practices focus on a

statewide customer-base without consideration of the needs of the local communities that comprise that larger group. It is essential that TxDOT explicitly embrace local communities into their mission.

To avoid these assumptions about the need only for mobility and dependence on increasing flow of traffic, it will be necessary to change TxDOT's current assumptive practices that are causing cognitive bias and prohibiting them from moving forward most effectively. A powerful first step is to modify the TxDOT mission to include accessibility along with mobility, which will help give TxDOT a more balanced perspective on a different scale and make them more open to public input.

This shift in paradigm from a mobility-centric model will not only require the assent of the Texas Transportation Commission and legislature, but those bodies will need to be the driving force behind that shift. Nonetheless, TxDOT has the power to communicate to those bodies the importance of this shift and work with them to realize a new future for the agency.

STOP USING THE TRAVEL TIME INDEX

Travel Time Index should be abandoned in favor of a more meaningful metric, such as Vehicle Miles Traveled, for determining problems areas and successful solutions.

While the Federal Highway Administration and TxDOT both have metrics that define a successful project, neither takes community stakeholders' transportation solutions that were developed into account. That is, there is no accounting for how well TxDOT actually satisfied the concerns or needs of the community—whether that community is local or statewide. More over, the quantifiable metrics that TxDOT does use are questionable in terms of whether the solution effectively satisfied the problem. As noted above, the Travel Time Index used to evaluate traffic flow is not an effective measure for long-term traffic solutions, as it promotes long distance commutes (Cortright, *Measuring Urban Transportation Performance: A Critique of Mobility Measures and a Synthesis*, 2011, p. 13). This is a good example of how TxDOT evaluates transportation in a vacuum rather than taking other important factors into consideration.

While it may be useful to measure delay in combination of another efficiency metric, the measurement of delay alone has negative consequences. The exclusive use of delay metrics again points to the disparity in scale. Delay is a concern for long-distance travel, and the consequence of focusing on solely on continuously improving delay is sacrificing accessibility.

A more meaningful metric might be Vehicle Miles Traveled (VMT), as that metric will indicate how far drivers must travel to reach their destinations. Tracking these data will allow TxDOT to see transportation systems in conjunction with land use and other economic factors. As VMT increases, the greater expense TxDOT must make to create

and maintain infrastructure and the greater the expense stakeholders must make traveling to their destinations.

IMPROVE THE GATHERING OF INFORMATION THAT AFFECTS PUBLIC INVOLVEMENT

TxDOT must define meaningful public involvement criteria to track that will allow them to continuously improve how public involvement input is incorporated into transportation solutions with beneficial effect.

The goal for public involvement is to continually improve how public interests affect final projects in a positive way. To make that evolution possible it is essential to track a variety of criteria that will inform how to make those improvements. Some of those criteria are:

- The specific communities and interest groups involved with the process
- The point in the process input was given by stakeholders
- Number of stakeholders involved in each public involvement event
- The comments and responses during events
- Design changes made in response to stakeholder input
- Stakeholder satisfaction with the public involvement event
- Stakeholder satisfaction with the final product

By tracking and reporting on these criteria and others like them, TxDOT will be able to move closer to some optimal range of participants, streamline processes, and adapt appropriately to different project challenges.

Another key criterion to track is stakeholders' satisfaction, and TxDOT should use surveys to track how satisfied the public is with final outcomes of transportation projects. This is important not only in terms of their satisfaction with the actual public involvement events, but with the final outcome of the projects with which they were involved.

The development of these surveys should not be taken lightly. It is essential that analysts be able to determine the diversity of perspectives in the survey and the specific responses attributed to various groups, such as commuters, local business owners, rural or urban resident, etc. Tracking this data will help TxDOT see if there is imbalanced influence from any given demographic, or perhaps if certain demographics tend to be particularly insightful for developing solutions.

While satisfaction surveys are somewhat subjective, qualitative assessments are still important determinants for success. Without gathering these data, it limits TxDOT's definition of success to whether or not a solution is built on time and on budget. These criteria are not enough. The solution that was built may be a marvel of engineering, but if it does not actually improve the lives of stakeholders, or perhaps even leaves stakeholders

worse off than before the solution that was implemented it cannot be considered a success.

AVOID CONFLICTS OF INTEREST

TxDOT must be conscious of special interests that might be unfairly influencing their planning process and diminishing the influence of public interests.

TxDOT's relationship with the legislature makes it difficult to avoid influence from lobbyists, but they can design the process so that such influence comes later in the process so that special interests are not given priority over public interests. It is the job of a public agency to make decisions with the aid of proper technical advice, without allowing special interests to dictate outcomes.

In the Katy Freeway and Grand Parkway case studies, the influence of special interests over public interests is apparent. The result in the Katy Freeway, where an engineering services firm (WSP | Parsons Brinkerhoff) acted as a public involvement consultant among other responsibilities, is a highway that is massively overbuilt and has increased congestion (Cortright, Lobbyist Holds Up Spectacular Example of the Futility of Widening Highways, 2016). The result in the Grand Parkway where developers and elected officials pushed the project through for personal profit (Schmitt, 2011), is continued sprawl development (Sarnoff, 2014).

It is important to recognize that consultants, if not properly vetted, may also pose as a potential conduit for these special interests that stifle important public interests. HNTB is a leader in transportation engineering and it follows that they would be called on to advise TxDOT on how best to realize a plan; however, calling on HNTB to help make a decision for what kind of solution would be implemented is short-sighted. An organization like HNTB or WSP | Parsons Brinkerhoff will almost certainly choose the option that requires more infrastructure. They have a vested interest in increasing transportation construction. That is their business. Consulting firm that do not provide construction or engineering services, and instead focus exclusively on customer service and public involvement will garner much better unbiased results for TxDOT.

TxDOT must have the best interest of community stakeholders as their focus. Allowing self-interested parties in too early in the process will sabotage not only the public involvement process, but also everything from designing of the solution to implementation.

IMPROVE PUBLIC ENGAGEMENT METHODOLOGIES AND TOOLS

Transportation planners should establish a consistent planning process that involves community stakeholders early, and use neutral methodology for engaging with stakeholders and facilitating discussion among groups of stakeholders.

Currently TxDOT seems more focused on the number of public involvement events it holds rather than how effective those events might be. The quantity of events is meaningless if the events are not actually collecting public ideas and incorporating them into the plan.

There are two ways TxDOT can quickly improve their engagement with the public.

- Design an Effective Public Involvement Process
- Interact from A Neutral Position

Design an Effective Public Involvement Process

At the root of successful public involvement is the order in which an organization engages the public. Currently TxDOT is not doing enough to involve the public early in the process to determine best solutions. Nor are they effectively identifying how different groups can benefit the process. Focus groups can be an effective way to target specific issues with subject matter experts and stakeholders who have a particular interest or knowledge in a specific area. The use of such groups can save time and bring structure to a process. In the field of corporate consulting, marketing, and academic research focus groups are a common practice (Morgan & Krueger, p. 3). One of the ways focus groups can be effective is by bridging the gap between different groups of professionals. The absence of a shared vocabulary and a narrowly focused understanding of a subject by

each of those groups can serve as serious obstacles to a comprehensive solution and successful project.

Because the interactions in focus groups provide a clear view of how others think and talk, they are a powerful means of exposing professionals to the reality of the customer, student, or client. In addition, because the professionals work with the research team to set the questions for the discussions, they can get immediate and vivid feedback about how others respond to their ideas. The advantages that focus groups provide for bridging such gaps help to explain their popularity in such otherwise diverse applications as showing manufacturers how consumers respond to their products, helping survey researchers find appropriate questionnaire topics and wording, and providing public health workers with new insights into promoting healthy behavior (Morgan & Krueger, p. 16).

If community stakeholders are considered an expert group, as they should be, it is clear how this gap was a problem in the Austin I-35 case study where both TxDOT and Reconnect Austin had a breakdown in communication with members of the community in large part due to when they chose to engage with the community in the process.

Figure 8 below illustrates how TxDOT can use focus groups early in the process and present interests and options to general stakeholders for further development. Note that this process is strictly for the public involvement process. The complete planning process would also incorporate other stakeholders, such as the legislature and engineering consultants. Figure 9 is TxDOT's full project development as presented on their website.

The diagram illustrated in Figure 8 would fall in the very first phase of the project development process, Project Initiation.

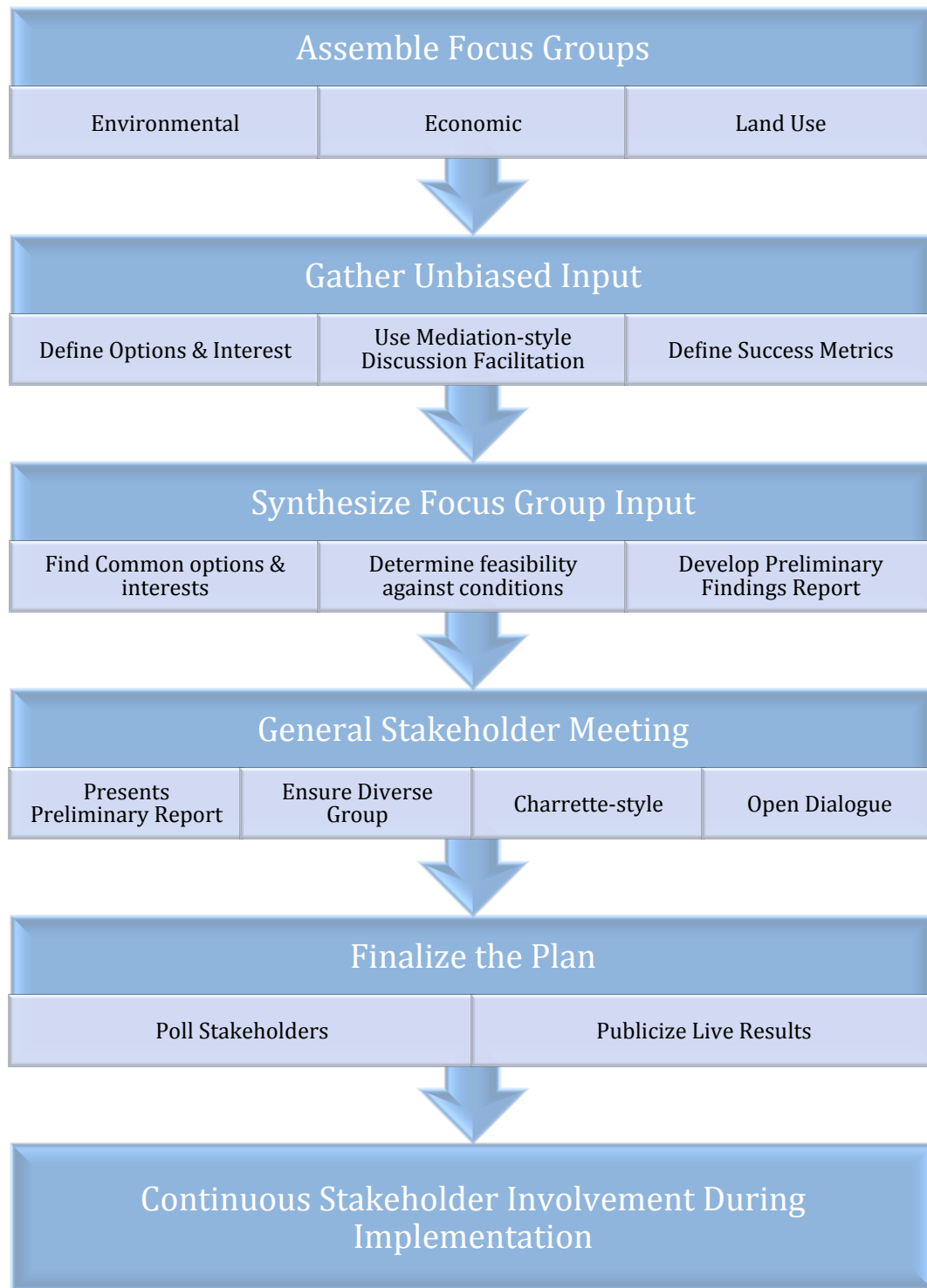


Figure 8: Recommended Public Involvement Process



Figure 9: TxDOT Project Development Process (Texas Department of Transportation, n.d.)

Interact from a Neutral Position

When working with different stakeholder groups it may often seem that their interests are at odds with one another. It is important for TxDOT and other transportation planners to see themselves as organizations that can find solutions that are mutually beneficial to all parties.

A principles of proper mediation parallel the methods of effective negotiation developed through the Harvard Negotiation Project and published in Roger Fisher and William Ury's seminal book *Getting to Yes: Negotiating Agreement Without Giving In*.

- Separate the people from the problem
- Focus on interests, not positions
- Invent options for mutual gain
- Insist on using objective criteria

By following this method, facilitators of public involvement events can avoid pre-conceived notions or assumptions about what is the best overall solution. The frustrations expressed by the interviewees for this report reflected a distrust and resentment toward TxDOT that was heavily based on TxDOT making assumptions about circumstances and the perception that the agency is only interested in placating participants rather than incorporating them into the planning process.

The use of mediation methods will keep facilitators from steering participants in any particular direction and enable participants to voice their own interests and opinions without outside influence.

Kimberly Kovach's text *Mediation, Principles and Practices* provides a concise breakdown of the stages of the mediation process.

1. Preliminary Arrangements
2. Mediator's Introduction
3. Opening Statements by Parties
4. Information Gathering
5. Issue and Interest Identification
6. Option Generation
7. Bargaining and Negotiation
8. Agreement
9. Closure

Transportation planners, and in fact facilitators involved with design planning for that matter, should follow these stages of mediation. Doing so will significantly improve the likelihood of an effective public involvement process.

The 2008 [Chartered Institute of Personnel and Development] survey on workplace mediation showed that three-quarters of respondents considered mediation to be the most effective approach to resolving conflict in the workplace. In the GFK NOP [a market research company] telephone survey of managers in 500 [small- to medium-sized enterprises], of those that had used mediation, 99% agreed that it was a good tool for resolving workplace disputes (Advisory, Conciliation and Arbitration Services, February 2013, p. 14).

Key to this process is focusing on the interests of the parties. Getting caught up in political posturing or irrelevant accusations can quickly stall progress. A template like the one shown in Figure 10 can be a useful tool to ensure consistent and successful interactions with stakeholders focusing on capturing interests.

Interests are what the participants want or need as outcomes of the project. Options are the potential solutions or outcomes that will address interests. In this template all interests are captured in one list and all options are captured in another list rather than interest and options lists for each group. By combining all focus groups interests and options facilitators can avoid the perception that they are at odds with one another. The act of creating separate lists can give the impression that there are camps competing for an

advantage. Instead facilitators should create an environment where all participants are working toward a shared mutual goal. Moreover, TxDOT and other transportation planners can empower participants to be influential in the process of developing the best solutions to a problem.

Focus Groups		
Land Use	Environmental	Economic
Group Overviews		

Combined Interests	Combined Options

Figure 10: Suggested Public Feedback Template

Concluding Remarks

Of all the recommendations and finding in this report, the single most important point is that TxDOT must incorporate land use planning into its planning and solutions. Successfully implementing this change will require TxDOT to educate the legislature as to why this is such an important factor for improving how the agency does business in Texas. Incorporating land use into the planning process brings stakeholders into the fold and redefines their scope in a way that will make TxDOT significantly more effective in realizing smart transportation solutions for Texas. To ignore this fact is negligent and does tremendous environmental and socioeconomic harm to the state of Texas.

There is a tendency in organizations large and small to sometimes put up barriers to the customer. Doing so enables those organizations to create fictions about their performance. The perception is that working closely with customers is difficult because in any industry they are, by definition, demanding. The reality, however, is that close collaboration with customers benefits the process because it inspires innovation and encourages efficiency.

Regardless of these benefits, in the public sector, this kind of customer collaboration can be particularly difficult because profit is not the ultimate goal, which makes measuring success sometimes difficult. Further complicating things for TxDOT is the fact that they are an executive branch agency, which empowers them with certain decision-making

authority that does not require immediate stakeholder satisfaction. Stakeholders are not able to fire TxDOT or choose another company to take their place in future projects if they are dissatisfied with results.

TxDOT has a very big job in a very big state. Opening up a dialogue to stakeholders who often have limited understanding of big and complex issues can seem like a bad idea. Moreover, creating some semblance of focus as to what is in their scope of responsibility and what is outside that scope is only natural and right. The way TxDOT has gone about doing that, however, severely limits their ability to accomplish what is best for its stakeholders and transportation in Texas.

Limiting dialogue with customers or creating only an illusion of engagement as TxDOT often does, only makes the process more difficult and develops subpar solutions with potentially harmful effects. The same is true of limiting one's scope of responsibility in such a way that essential factors are excluded from the decision-making process. More robust public involvement and a better defined scope of responsibility for TxDOT would have a substantial positive effect transportation in Texas.

We must create a vision for our future transportation system and move beyond a budget and transportation policies focused on construction and maintenance of the highway system to new policy and budget systems that support multimodal, transformative transportation options for Texas.

—2015-2019 TxDOT Strategic Plan

(Texas Department of Transportation, July 7, 2014)

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